

data comprise data defining the evolution of said cycles in a temporal vicinity of said cyclical sound waveform and the change in shape of said cycles in said temporal vicinity from cycle to cycle;

(c) designating said successive cyclical sound waveform sample as a cyclical sound waveform sample and repeating (b);

21 (d) repeating (c) a plurality of times to generate a sequence of said successive cyclical sound waveform samples corresponding to a plurality of said cycles; and

(e) outputting the samples of said sequence to generate a waveform representing a cyclical sound.

32 3. (Twice Amended) A method according to claim 1 in which said transformation data does so by reference to a predetermined reference waveform sequence.

33 6. (Twice Amended) A method according to claim 5 in which said transformation data does so by reference to a predetermined reference waveform sequence and in which said transformation data represents a transformation which approximates a transformation which would transform a first displacement vector, extending from a first time point on said reference waveform sequence to a corresponding time point on the waveform to be synthesised, to a second displacement vector extending from a second point, successive to the first, on said reference waveform sequence to a corresponding second point on the waveform to be synthesised.

73 8. (Twice Amended) A method according to claim 1, in which said step (b) comprises calculating said transformation data from a set of stored waveform values.

18. (Amended) Synthesis apparatus comprising:

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- (a) means for generating a cyclical sound waveform sample;
 - (b) means for generating a successive cyclical sound waveform sample from said cyclical sound waveform sample and transformation data, wherein said transformation data comprise data defining the evolution of said cycles in a temporal vicinity of said cyclical sound waveform and the change in shape of said cycles in said temporal vicinity from cycle to cycle;
 - (c) means for designating said successive cyclical sound waveform sample as a cyclical sound waveform sample and repeating (b);
 - (d) means for repeating (c) a plurality of times to generate a sequence of said successive cyclical sound waveform samples corresponding to a plurality of said cycles; and
 - (e) means for outputting the samples of said sequence to generate a waveform representing a cyclical sound.